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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,764	03/25/2004	George E. Richards	1925A1	7933

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PPG INDUSTRIES, INC.
Intellectual Property Department
One PPG Place
Pittsburgh, PA 15272

EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
02/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/809,764	RICHARDS ET AL.	
	Examiner	Art Unit	
	Jeff Wollschlager	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 12-24* is/are pending in the application.

4a) Of the above claim(s) *12,16 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9, 13-15 and 17-19 and 21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed November 30, 2007 has been entered. Claim 1 is currently amended. Claims 10 and 11 have been canceled. Claims 12, 16 and 20 remain withdrawn from further consideration. Claims 1-9, 13-15 and 17-19 and 21-24 are under examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of Chang et al. (US 4,973,439).

Regarding claims 1, 3 and 6, Harmuth teaches a method of forming pigmented powder coatings wherein a major portion of the non-pigmented constituents, such as resin binders and curing agents (col. 2, lines 51-68), are fed to an extruder and wherein the pigment dispersions,

the balance of the non-pigment constituents and a volatile dispersing liquid are introduced downstream of the major portion of the non-pigmented constituents (col. 1, line 55-col. 2, line 50). Subsequently, the blended constituents are urged to another zone within the extruder, devolatilized, and then upon exiting the extruder, the extrudate is cooled, broken into chips, and ground into a fine powder (col. 5, lines 1-22; col. 6, lines 16-32). As disclosed in the instant specification, pigments and flow additives are considered to be "hard to incorporate additives".

Harmuth meters the pigment dispersion into the extruder (col. 1, line 5-col. 2, line 50; col. 5, line 18-21). The metering of the pigment dispersion into the extruder as disclosed by Harmuth suggests and implies the liquid is injected. However, additionally, Chang et al. teach a method of introducing liquid mixture into an extruder wherein the liquid is injected (Figures 1 and 2).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have metered the pigment dispersion disclosed in the method of Harmuth by injecting the pigment dispersion and liquid material as suggested by Chang et al., since Chang et al. suggests injection is an art recognized equivalent means for introducing liquids into an extruder.

Further it is submitted that the pigment dispersion employed by Harmuth is implicitly fed from some vessel and that this vessel is reasonably understood to be a low-pressure vessel. It is also implicit that the pressure vessel is connected to a source of pressurization, such as atmospheric air or a nitrogen source, in order to effectively feed the metering device (i.e. net positive suction head to the pump). Further still, the pressure vessel would have implicitly and routinely contained a mechanism, such as a relief valve, rupture disk and/or a vacuum relief, for maintaining the pressure in the vessel to a desired value to ensure the vessel does not collapse or burst. The examiner notes that one having ordinary skill would have been motivated to

control the pressure as low as possible for the purposes of minimizing capital costs, minimizing plant utility costs (e.g. nitrogen), and to meet environmental requirements to minimize vapor emissions while ensuring the metering device was adequately fed and would have been motivated to employ a mechanism as claimed to prevent the vessel from collapsing or bursting.

As to claims 4 and 9, Harmuth discloses other additives, such as flow control additives, may be employed (col. 3, lines 30-37; col. 1 lines 55-68).

As to claim 5, the combination teaches the method as set forth above. Harmuth also discloses forming powdered coating compositions, plural (col. 1, lines 6-11), determining a suitable pigment-binder/resin ratio (col. 1, lines 55-60), and further discloses examples of suitable pigments (col. 3, lines 25-30), and exemplifies a control sample and an inventive sample employing the same base material (col. 5, lines 26-col. 6, lines 42). Harmuth does not expressly teach repeating the steps as claimed. However, the suggestion and implication of Harmuth as outlined above is that various thermosetting powder coatings may be formed as desired to produce a variety of viable products of varying colors, as is routinely practiced in the art.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have repeated the steps as claimed while practicing the method of Harmuth to produce a variety of powder coating compositions having different colors with the same base material.

As to claim 7, Harmuth discloses the pigments are similar to those used in conventional coatings and exemplifies the formation of one suitable liquid pigment dispersion (col. 4, lines 3-34).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of Chang et al. (US 4,973,439), as applied to claims 1, 3-7, and 9 above, in view of either of Rudolph (US 4,684,488) or Fintel (US 4,919,872).

As to claim 2, the combination teaches the method as set forth above. Harmuth does not expressly teach the claimed monitoring and control steps. However, each of Rudolph (Abstract; Figure 1; col. 1, line 8-col. 2, line 8; col. 3, lines 1-24); and Fintel (Figure 2; Figure 4; col. 1, lines 11-23; col. 4, lines 3-48) individually teach processes for controlling the color of extruded materials.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have combined the color control teachings found in either of Rudolph or Fintel with the method of Harmuth, for the purpose of providing a high quality powder coating material having the desired color while reducing production waste and costs.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of Chang et al. (US 4,973,439), as applied to claims 1, 3-7, and 9 above, and further in view of either of Rathschlag et al. (US 6,638,353) or Dietz et al. (US 6,537,364).

As to claims 7 and 8, the combination teaches the method as set forth above wherein a suitable pigment is added to an extruder with a volatile dispersing liquid and thereby teaches a liquid pigment dispersion in one reasonable interpretation of the claim. Alternatively, Rathschlag et al. (Abstract; col. 1, lines 9-22; col. 2, lines 25-68; col. 4, lines 5-11; col. 6, lines 42-col. 7, lines 63; col. 8, lines 24-43) and Dietz et al. (Abstract; col. 1, lines 39-48; col. 8, lines 15-68; col. 10, lines 12-14) disclose small particle size pigments suitable for employment in

powder coating applications that are formed from liquids, optionally dried, and then used as pigments in processes for forming powdered coatings.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the pigments disclosed by either of Rathschlag et al. or Dietz et al. in the method of Harmuth since Rathschlag et al. teach their pigment is non-dusting (Abstract) and Dietz et al. suggest their pigments have reduced levels of foreign contamination and a narrow size distribution (col. 1, lines 39-46).

Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of either of Vanier et al. (US 2003/0125417) or Dietz et al. (US 6,537,364).

Regarding claim 13, Harmuth teaches a method of forming pigmented powder coatings wherein a major portion of the non-pigmented constituents, such as resin binders and curing agents (col. 2, lines 51-68), are fed to an extruder and wherein the pigment dispersions, the balance of the non-pigment constituents and a volatile dispersing liquid are introduced downstream of the major portion of the non-pigmented constituents (col. 1, line 55-col. 2, lines 50). Subsequently, the blended constituents are urged to another zone within the extruder, devolatilized, and then upon exiting the extruder, the extrudate is cooled, broken into chips, and ground into a fine powder (col. 5, lines 1-22; col. 6, lines 16-32). Harmuth does not expressly teach the pigment is a “hyperdispersed pigment”.

However, each of Vanier et al. (paragraphs [0003-0008; 0021-0022; 0027-0028]) and Dietz et al. (Abstract; col. 1, lines 39-48; col. 8, lines 15-68; col. 10, lines 12-14) disclose pigments suitable and desirable for powder coating applications that meet the “hyperdispersed” limitation in the claim.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the pigments disclosed by either of Vanier et al. or Dietz et al. in the method of Harmuth since Vanier et al. teach their colorants yield desired visible colors (paragraph [0021) having a desired absorbance in the visible light spectrum (paragraph [0007]) and Dietz et al. suggest their pigments have reduced levels of foreign contamination and a narrow size distribution (col. 1, lines 39-46).

As to claim 15, Harmuth teaches the method as set forth above. Harmuth also discloses forming powdered coating compositions, plural (col. 1, lines 6-11), determining a suitable pigment-binder/resin ratio (col. 1, lines 55-60), and discloses examples of suitable pigments (col. 3, lines 25-30), and exemplifies a control sample and an inventive sample employing the same base material (col. 5, lines 26-col. 6, lines 42). Harmuth does not expressly teach repeating the steps as claimed. However, the suggestion and implication of Harmuth as outlined above is that various thermosetting powder coatings may be formed as desired to produce a variety of viable products of varying colors as is routinely practiced in the art.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have repeated the steps as claimed while practicing the method of Harmuth to produce a variety of powder coating compositions having different colors with the same base material.

Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of either of Vanier et al. (US 20030125417) or Dietz et al. (US 6,537,364), as applied to claims 13 and 15 above, and further in view of either of Rudolph (US 4,684,488) or Fintel (US 4,919,872).

As to claim 14, Harmuth teaches the method as set forth above. Harmuth does not expressly teach the claimed monitoring and control steps. However, each of Rudolph (Abstract; Figure 1; col. 1, line 8-col. 2, line 8; col. 3, lines 1-24); and Fintel (Figure 2; Figure 4; col. 1, lines 11-23; col. 4, lines 3-48) individually teach processes for controlling the color of extruded materials.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have combined the color control teachings found in either of Rudolph or Fintel with the method of Harmuth, for the purpose of providing a high quality powder coating material having the desired color while reducing production waste and costs.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of either of Vanier et al. (US 20030125417) or Dietz et al. (US 6,537,364), as applied to claims 13 and 15 above, and further in view of Chang et al. (US 4,973,439).

As to claims 21 and 22, Harmuth meters the pigment dispersion into the extruder (col. 1, line 5-col. 2, line 50; col. 5, line 18-21). The metering of the pigment dispersion into the extruder as disclosed by Harmuth suggests and implies the liquid is injected. However, additionally, Chang et al. teach a method of introducing liquid mixture into an extruder wherein the liquid is injected (Figures 1 and 2).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have metered the pigment dispersion disclosed in the method of Harmuth by injecting the pigment dispersion and liquid material as suggested by Chang et al., since Chang et al. suggests injection is an art recognized equivalent means for introducing liquids into an extruder.

Further it is submitted that the pigment dispersion employed by Harmuth is implicitly fed from some vessel and that this vessel is reasonably understood to be a low-pressure vessel. It is also implicit that the pressure vessel is connected to a source of pressurization, such as atmospheric air or a nitrogen source, in order to effectively feed the metering device (i.e. net positive suction head to the pump). Further still, the pressure vessel would have implicitly and routinely contained a mechanism, such as a relief valve, rupture disk and/or a vacuum relief, for maintaining the pressure in the vessel to a desired value to ensure the vessel does not collapse or burst. The examiner notes that one having ordinary skill would have been motivated to control the pressure as low as possible for the purposes of minimizing capital costs, minimizing plant utility costs (e.g. nitrogen), and to meet environmental requirements to minimize vapor emissions while ensuring the metering device was adequately fed and would have been motivated to employ a mechanism as claimed to prevent the vessel from collapsing or bursting.

Furthermore, it is the examiner's position that any of the claimed structural limitations not implicit or intrinsic within the Harmuth reference do not affect the step-wise completion of the process in a manipulative sense. It is submitted that to be entitled to patentable weight in method claims, recited structural limitations must affect the method in a manipulative sense and not amount to mere claiming of a use of a particular structure. See *Ex parte Pfeiffer* 135 USPQ 31.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of either of Vanier et al. (US 2003/0125417) or Dietz et al. (US 6,537,364), and in view of either of Rudolph (US 4,684,488) or Fintel (US 4,919,872).

Regarding claim 17, Harmuth teaches a method of forming pigmented powder coatings wherein a major portion of the non-pigmented constituents, such as resin binders and curing

agents (col. 2, lines 51-68), are fed to an extruder and wherein the pigment dispersions, the balance of the non-pigment constituents and a volatile dispersing liquid are introduced downstream of the major portion of the non-pigmented constituents (col. 1, line 55-col. 2, lines 50). Subsequently, the blended constituents are urged to another zone within the extruder, devolatilized, and then upon exiting the extruder, the extrudate is cooled, broken into chips, and ground into a fine powder (col. 5, lines 1-22; col. 6, lines 16-32). Harmuth does not expressly teach the pigment is a "hyperdispersed pigment" nor does Harmuth expressly teach the claimed monitoring and control steps.

However, each of Vanier et al. (paragraphs [0003-0008; 0021-0022; 0027-0028]) and Dietz et al. (Abstract; col. 1, lines 39-48; col. 8, lines 15-68; col. 10, lines 12-14) disclose pigments suitable and desirable for powder coating applications that meet the "hyperdispersed" limitation in the claim. Furthermore, each of Rudolph (Abstract; Figure 1; col. 1, line 8-col. 2, line 8; col. 3, lines 1-24); and Fintel (Figure 2; Figure 4; col. 1, lines 11-23; col. 4, lines 3-48) individually teach processes for controlling the color of extruded materials.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have combined the color control teachings found in either of Rudolph or Fintel with the method of Harmuth, for the purpose of providing a high quality powder coating material having the desired color while reducing production waste and costs. Additionally, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have combined the color control teachings found in either of Rudolph or Fintel with the method of Harmuth, for the purpose of providing a high quality powder coating material having the desired color while reducing production waste and costs. As to claim 18, Harmuth teaches the method as set forth above. Harmuth also discloses forming powdered coating compositions, plural (col. 1, lines 6-11), determining a suitable

pigment-binder/resin ratio (col. 1, lines 55-60), and discloses examples of suitable pigments (col. 3, lines 25-30), and exemplifies a control sample and an inventive sample employing the same base material (col. 5, lines 26-col. 6, lines 42). Harmuth does not expressly teach repeating the steps as claimed. However, the suggestion and implication of Harmuth as outlined above is that various thermosetting powder coatings may be formed as desired to produce a variety of viable products of varying colors as is routinely practiced in the art.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have repeated the steps as claimed while practicing the method of Harmuth to produce a variety of powder coating compositions having different colors with the same base material.

As to claim 19, Harmuth discloses the pigments are similar to those used in conventional coatings and exemplifies the formation of one suitable liquid pigment dispersion (col. 4, lines 3-34). Furthermore, Dietz et al. (Abstract; col. 1, lines 39-48; col. 8, lines 15-68; col. 10, lines 12-14) and Vanier et al. (paragraph [0027]) disclose small particle size pigments suitable for employment in powder coating applications that are formed from liquids and then used as pigments in processes for forming powdered coatings.

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmuth (US 4,320,048) in view of either of Vanier et al. (US 20030125417) or Dietz et al. (US 6,537,364), and in view of either of Rudolph (US 4,684,488) or Fintel (US 4,919,872), as applied to claims 17-19 above, and further in view of Chang et al. (US 4,973,439).

As to claims 23 and 24, Harmuth meters the pigment dispersion into the extruder (col. 1, line 5-col. 2, line 50; col. 5, line 18-21). The metering of the pigment dispersion into the extruder as disclosed by Harmuth suggests and implies the liquid is injected. However, additionally,

Chang et al. teach a method of introducing liquid mixture into an extruder wherein the liquid is injected (Figures 1 and 2).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have metered the pigment dispersion disclosed in the method of Harmuth by injecting the pigment dispersion and liquid material as suggested by Chang et al., since Chang et al. suggests injection is an art recognized equivalent means for introducing liquids into an extruder.

Further it is submitted that the pigment dispersion employed by Harmuth is implicitly fed from some vessel and that this vessel is reasonably understood to be a low-pressure vessel. It is also implicit that the pressure vessel is connected to a source of pressurization, such as atmospheric air or a nitrogen source, in order to effectively feed the metering device (i.e. net positive suction head to the pump). Further still, the pressure vessel would have implicitly and routinely contained a mechanism, such as a relief valve, rupture disk and/or a vacuum relief, for maintaining the pressure in the vessel to a desired value to ensure the vessel does not collapse or burst. The examiner notes that one having ordinary skill would have been motivated to control the pressure as low as possible for the purposes of minimizing capital costs, minimizing plant utility costs (e.g. nitrogen), and to meet environmental requirements to minimize vapor emissions while ensuring the metering device was adequately fed and would have been motivated to employ a mechanism as claimed to prevent the vessel from collapsing or bursting.

Furthermore, it is the examiner's position that any of the claimed structural limitations not implicit or intrinsic within the Harmuth reference do not affect the step-wise completion of the process in a manipulative sense. It is submitted that to be entitled to patentable weight in method claims, recited structural limitations must affect the method in a manipulative sense and

not amount to mere claiming of a use of a particular structure. See *Ex parte Pfeiffer* 135 USPQ 31.

Response to Arguments

Applicant's arguments and the rule 1.132 declaration filed November 30, 2007 have been fully considered, but they are not persuasive.

Regarding claim 1, applicant's arguments and the rule 1.132 declaration argue and submit that both Harmuth and Chang teach against low pressure operation of an extruder and that accordingly, claim 1 distinguishes over the cited combination. This argument is not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., operating the extruder at low pressure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner notes that the amendment to claim 1 only requires that the pressure in the pressure vessel that feeds the additive/pigment to the extruder is maintained at less than 100 psi and does not require that the extruder is operated at "low pressure". The examiner notes that these are different pressures. The examiner notes, for example, that Chang et al. employ a pump (63) for injecting the liquid additive into the extruder. As such, it is the pump that needs to overcome the pressure in the extruder, not the pressure vessel feeding the additive/pigment. As such, the arguments directed to the extrusion pressure are not commensurate in scope with the claim.

Further, the examiner maintains that the pigment dispersion employed by Harmuth is implicitly (if not inherently) fed from some vessel and that this vessel is very reasonably

understood to be a pressure vessel. The examiner notes that one having ordinary skill would have been motivated to control the pressure in the vessel storing the additive/pigment as low as possible for the purposes of minimizing capital costs, minimizing plant utility costs (e.g. nitrogen), and to meet environmental requirements to minimize vapor emissions while ensuring the metering/injecting device was adequately fed (i.e. net positive suction head required to avoid pump cavitation) as is routinely practiced in the art. The examiner notes, for example, that Harmuth exemplifies toluene as the dispersing liquid for the pigment. The vapor pressure of toluene at ambient temperature (25 °C) is 0.5 psi. As such, one having ordinary skill would have only maintained the pressure in the vessel at approximately 0.5 psi plus any head loss between the outlet of the vessel and the inlet of the pump to ensure the pump was adequately fed without causing cavitation.

Further, the examiner notes that the pressure in an extrusion process is directly related to the feed rate and the temperature in the extruder and that, as such, pressure is a result effective variable that would have been readily optimized as is routinely practiced in the art. Further still, the examiner notes that Chang et al. disclose that the pressure at the discharge of the extruder (i.e. head pressure) is as low as 200 psi. Accordingly, it generally follows that the pressure in the extruder of Chang et al. increases from 14.7 psi (atmospheric pressure) at the inlet of the extruder to 200 psi at the discharge of the extruder. As both Harmuth and Chang et al. suggest feeding the additive downstream of the main inlet to the extruder, it generally follows that the range of pressure to be overcome by the injecting liquid in the combination is more than 14.7 psi and less than 200 psi. As such, the teaching of the combination in this view essentially creates an overlapping range of pressure with that claimed (even assuming, for the sake of argument, that the pressure in the pressure vessel was the same as the pressure in the

extruder, which for the reasons set forth above, the examiner maintains they are not) and is *prima facie* obvious.

Regarding claims 13 and 17, applicant argues that the claims are directed to dried (emphasis added by applicant) liquid pigment dispersions while Harmuth is directed to pigment dispersions containing liquids. This argument is not persuasive. The examiner notes that claims 13 and 17 do not require that the pigment is added in the form of a dried liquid pigment dispersion exclusively. Claims 13 and 17 only require a dried liquid pigment dispersion "when added with the base material" and do not require a dried liquid pigment dispersion when the pigment is "added...separately" from the base material. Since Harmuth adds the pigment separately from the base material it is not required to be a dried liquid pigment dispersion. Accordingly, the examiner submits that the scope of the claims 13 and 17 are broader than that which has been argued and are met by the combination of references.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./
Examiner, Art Unit 1791

February 13, 2008

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791